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# A NOTE ON THE THEORY OF RELATIVITY

IT is obvious that the materialist can not be altogether happy about the cosmological picture presented by modern physics until he can find an interpretation of the theory of relativity which enables him to assimilate it to his own existential categories. These are not relative to frames and observers. May it not, then, be the case that kinematic knowledge has in some measure been confused with the absolutes of the cosmic situation? In the present brief paper I wish to explore this possibility. I have been motivated by my own epistemological and ontological reflection, by a study of the shift from Lorentz to Einstein, by Russell's anti-substance deductions, and by Jeans's admission of the extraordinary simplicity of the ideas of space and time entertained by physicists before Einstein. This latter fact encourages me to wonder whether it may not be the case that rod-and-clock measurements, $s$ and $t$, have not, for the relativist, pushed aside, and been somewhat naïvely substituted for, the categorical characteristics of the universe to which they correspond, namely, physical extensity and change. In relative motion we are aware of the fact that changes in the relational distance between bodies are occurring though we can seldom assign causal responsibility. Motion, I take it, is more cognitional than movement. *Movement* is existential, relational, situational, and absolute.

At any rate, queries are still justifiable about the import of relativity. And it must not be forgotten that philosophy had long been skeptical of Newtonian space and time. No philosopher worth his salt is going to defend ether, Space, Time, absolute motion with respect to ether, Space, and Time, etc. In fact, he is likely to reject concepts still held in a ghost-like form by many relativists, such as unknowable motion with respect to ether and space. Certainly, for me, the universe consists of physical systems at changing distances from one another and of electro-magnetic and gravitational *processes* permeating these physical systems and regional distances.

## I

I am persuaded that relativity can best be understood as a postulational development designed to overcome the dilemmas into

which Lorentz had strayed because of his ether-space, absolute frame. It is, I presume, well known that Lorentz had worked out his transformation equations and his distinction between true time $t$ and artificial time $t'$, and even the idea of an observer in relation to a position in ether and another in relation to a moving body in ether-space. Einstein's magnificent reconstruction consisted in the pushing to one side of this preconception of *absolute motion with respect to ether-space* and the emphasizing of the *relative motion* of any two bodies with respect to each other. This is the reason why he stresses relative motion. In this set-up both times have equal rights and can be calculated reciprocally by means of the Lorentz equation.

It was, as I have said, a magnificent reconstruction of the Lorentz formulation and brought empiricism and observation and kinetic stipulation and calculation to the fore. But did it also involve a basic philosophy which reconceived what we should mean by time and space existentially? That is what I permit myself to doubt. In fact, Einstein keeps "space" though he rejects ether. This point appears more in the general theory than in the restricted theory. In the present paper I shall, in the main, disregard the general theory, merely permitting myself to say that its value probably lies in its recognition of the empirical vagueness of Newton's terms. How can we determine the absolute distance between masses? Russell is obviously correct in saying that Newton's variables could not be given values of a precise sort. But are we not here again confronted by limitations in knowledge and its categories? The existential situation may not be correctly thought as the distortion of "space" in regions filled with matter. But let us postpone such questions since so much depends upon the correct interpretation of the so-called shortening of rods in the special theory. In the general theory this appears in the shortening of the circumference of circles.

## II

Suppose, then, we come back to light as a self-repeating, extensity-activity. This principle signifies that it travels absolute distances at an intrinsically determined speed. Also it signifies that light has no frame, medium, or space with which it must be coördinated. We can forget about the traditional dualism in terms of which motion was conceived. Neither bodies nor light move through Space. The job is to conceive properly the relationship between light and material systems.

Now, so far as I can see it, we should expect light to have the same velocity when measured in relation to bodies from its source

in them or as reflected from a mirror. For light there is no preferred frame. It just covers distances with the same velocity. Astronomers were quite justified in setting their clocks in accordance with the formula: distance between the points divided by *C*, the velocity of light. Light did not drop off into ether or space, something through which the earth was moving. That was, as I conceive it, a quite unnecessary complication.

Both physical space and coördinate spaces are built by the human mind around material things. The danger has been that of reifying abstractions as receptacles. Newtonian space and ether reflected such hypostatization. But are we not extended bodies adjusting ourselves to other extended bodies, watching their motions and movements and noting *distances*. The problem is to fit light into this kind of material cosmos. It is fatally easy to think it also as a thing moving about in space as a kind of background. The theory of ether, as a necessary medium, played into this paralogism. It made light assignable to an ether-sea through which bodies moved.

My suggestion is to keep light in relation to bodies. To do so, the essential principle is to emphasize the source or the reception. Cut it loose from these terms and it is so easy to associate it with *empty space* as a kind of *Gestalt* background. Then before one realizes it bodies and light are moving in such empty space. *"In vacuo"* should, therefore, be taken as a negative term, that is, free from effects of matter. But a measurable, absolute distance must be laid out with reference to material loci. The only distances are those between, and over, bodies.

Now, in a sense, all this is just empirical good reasoning. But it follows that the Michelson-Morley experiment was motived by preconceptions which today, thanks largely to Einstein, are easily discarded. We should expect light to go in all directions from its source with the same velocity and give no interference effects for the experimenter. Hence we should not concoct the Fitzgerald contraction. Light has no concern with the motion of the earth since it is not tied up with ether or space. Nor do I think that the motion of the earth is. Actually it is a *movement*, a process, set going eons ago and is of a relational dynamic, distance-travelling sort.

Now the M-M experiment was interpreted as signifying that the motion of the earth through the ether could not be discovered, that is, that *absolute motion, so defined*, was hidden from us. Is it not simpler just to say that there is no such kind of motion or movement? You can not detect a scheme which has no existence except in traditional physics. In short, the puzzle reflected false

preconceptions, and there are not two frames involved, nor are the M-M rods shortened in one direction. Relativists seem to me to be both ultra empirical and ready to accept unobservable shortenings.

But, if I am correct on the historical side, Einstein still retained much of the scheme, but emphasized a way of handling the kinematic problems involved. Concentrate on bodies moving with respect to one another and each having its coördinate space. We can then disregard any absolute motion and stress the relative motion between the bodies. Consider one of them as at rest. The relative velocity of the other is then established. We will have two CS systems in relative motion. Stipulate that the velocity of light is the same for all CS. Also that all laws of nature are the same in all CS moving uniformly, relative to each other. Yet light is somehow still kept *in space.*

Now I am ready to grant these two principles, only I must make a distinction. I would assert that the velocity of light is the same for all *physical systems* in which the source of light is given or rays mirrored. That is, within each system the formula $X^2 + Y^2 + Z^2 - c^2t^2 = 0$ holds. There must be no *arrière pensée* about ether or space. Lorentz had his preferred frame and wanted to make transformations for an observer in a frame moving with respect to it. But why make any transformation if there is no preferred frame? Surely only because one frame is *kinematically, or cognitionally, preferred.* And what this preference leads to we shall try to decipher.

## III

In mechanics, if the velocity of a material point is so-and-so, relative to one CS, then it will be different in another CS moving uniformly relative to the first. Does this mean anything for light? For Lorentz it did because a body moving in ether would have a different set of coördinates from a body at rest in ether. But if we give up ether and a cosmic medium called space, what does it continue to mean? Each flash of light must existentially be assigned a *physical locus.* Thence it streams off at a determinate speed in disregard of the changing distances of other things from that body. Such seems to me to be the new existential situation for cosmology. Light should be handled within each physical system as having the invariant velocity or distance-covering capacity of 186,000 miles per second. Between the bodies we have only the Doppler effect to account for and observe.

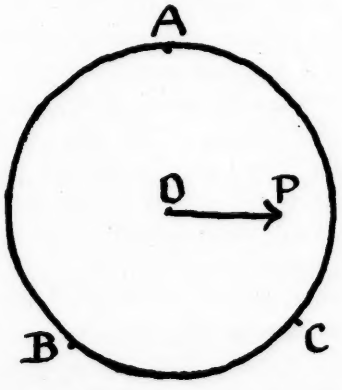
But the kinematic tradition of *coördinate spaces* built around bodies in relative motion now enters. Here we have complete pluralism and no literal overlapping. At the same time, following

the tradition in physics, light is thought of as moving in "space," *in vacuo,* as a kind of space. But, surely, as I have argued, "*in vacuo*" should only mean distance-travelling outside the influence of matter. It should not imply the ghost of ether, that is, a sea of something called space.

Now the physicist is seeking mensurational knowledge and he inevitably uses CS frames because he has no *intuition* of the existential situation I have portrayed. Let us remember, however, that these frames are plural and do not literally overlap, while the existential situation is one of things in changing distances and of electro-magnetic waves and gravitational stresses.

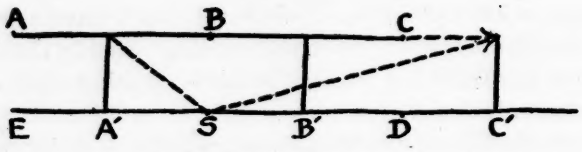
Einstein, we have argued, improved upon Lorentz but, perhaps, did not throw off completely some of the preconceptions of the time. He was primarily interested in kinematics and not in a clarification of epistemology and ontology. The two observers of Lorentz were in the same ether. The two observers of Einstein and light seem to be in the same space and yet at the same time in two CS frames. The Lorentz scheme gave the observer at *O* priority while the other observer *P* moved away from this center. Lorentz worked out his equations to explain how the observer at *P* might still regard himself as at the center of the flash at *O*. What Einstein did was to set up the kinematic stipulation that the velocity of light was the same for both observers and their relative frames. Thus he left the absolutely preferred frame of *O* below while keeping light moving "in space." Hence neither time has priority. But he keeps the physical distortions—for the other observer.

DIAGRAM No. 1.




I am now going to offer a setup which seems to me to clarify issues and to leave out metaphors like *inside observer* and *outside observer*. Light flashes pulse out coactually, or with approximate absolute simultaneity.

DIAGRAM NO. 2.




Flashes at *B* and *S* Coactual.

In both physical systems, which happen to be changing their absolute distances from each other, light travels with the same velocity *as an existential* fact and not as a kinematic stipulation. I shall consider the bottom system "at rest," even though I can not assign the onus for the movements involved. The fact is that they are distancing each other.

I shall first give the *existential analysis* of the situation and then contrast it with the *kinematic analysis* Einstein would offer and, in a fashion, put in its place.

There are, then, coactual flashes in each physical system and not in a neutral something called "space." But, if we consider the one in motion (assigned relational movement), the light gets to *C* before it is in the position *C'* in the coördinate space of *ESD*. This would mean physically that it was relationally opposite *C'*. The corresponding flash from *S* would need to travel past *D* to *C'* to catch up with it. Here light has to chase *C* and will take a longer time.

The coactual flash from *B* gets to *C* when, however, *C* is at the above relational distance from *S*, symbolized by *C'*. Thus far there is no relativity but only movement and existential distance. In neither case is light affected by motion. It just pulses out and pays no attention to the other body. This is what I would mean by the principle that motion does not affect the velocity of light. To the calculator at *S* it would seem *as though* the moving system must be contracted *if* the *same* beam of light gets to *A* and *C* simultaneously for the two frames. This was the set-up Einstein inherited. I have substituted two flashes *not* in "space" or ether. But the physical fact would simply be the motion of the physical body *ABC*. There would be no speeding up of light itself. Once we forget about the neutral medium, space, into which the flash was supposed by traditional physics to drop off, all this is logical. It corresponds to the existential situation as I see it.

Now I am merely arguing that this analysis shows that, once "space" as a light-medium is eliminated, we should expect the null result of the Michelson-Morley experiment. Physically speaking, light travels from its source in all directions and is not concerned with the motion or relational movement of its physical system. In

this fashion radiation is tied in with bodies not assigned a subterranean sea, a dualism which led to trouble. There is no need of shortening rods and slowing clocks. What can not be observed should not be believed in. People tell me that, if everything were shortened, I would not notice it. Of course, but why believe that everything is shortened if there is no evidence for it? It is better to give up preconceptions.

Let us turn next to the Einsteinian kinematic set-up. The observer on *ABC* is rightly persuaded that the flash at *B* gets to *A* and *C* simultaneously. But he is partly fooling himself. This simultaneity is seen by the observer at *S* to be merely operationally relative. This is, of course, Einstein's translation of Lorentz. Now I would argue that it is an absolute simultaneity physically and without contraction. But the observer at *S* considers the flash as not having the *existential locus B* but a *kinematic locus B'* in line with *S* and that it is in "space" and proceeds to chase *C*. Is this *CS* space or ether-space?

But is this not to confuse kinematic positions in the plurality of coördinate spaces with physical loci? And what is the relation of "space" to these coördinate spaces built around bodies?

Now I grant that the calculations developed by Einstein in his application of Lorentz are kinematically valid if they are meaningful. The physicist must determine how useful this kinematic construction is for his purposes. But I should think that, first of all, he would want to rid it of this confusion of *types*, kinematic and physical, which seems to me a holdover from the ether-space tradition. Because this distinction has not been made, kinematic knowledge is made into a cosmology of the queerest sort. We are told that space and time are inseparable and that only the *ts* manifold is objective. The physical world of common sense becomes largely an illusion; and knowledge is put in the place of existence. I have read many cosmologies which take their departure from relativity and they give me the queerest feeling. A little semantics guided by epistemology and ontology would, I argue, help. Needless to say, I long ago put physical extensity and distance in place of Newtonian Space, and local change in place of Newtonian Time, and absolute simultaneity, as coactual change, in place of a cosmic clock.

Now, of course, this is the puzzled protest of a confirmed physical realist who believes in determinate sizes and shapes as intrinsic to the material and energy which constitute them. And I take the simultaneity within both *ABC* and *ESD* to be absolute and hold that the clocks go ticking on synchronously in *ABC* even if it does move with respect to *ESD*. No doubt relativists can point out

my error. And when they do so I shall subside. But I have evidence that Einstein thinks that the rods do shorten for an observer outside the system and that rods do go more slowly and that this outside observer is right about it. As he admits, this undercuts materialism. To me, it is kinematic Berkeleianism. Naturally, I have the suspicion that it lies somewhere between Mach and Kant. The compromise would be that the ratios, as computed, correspond to the physical ratios in accordance with the Lorentz equations. That it is a kinematic *ars mensurandi*. Operational, relative simultaneity seems to be the ghost of Lorentz's artificial time.

I have argued that it has no relevance to the null result of the M-M experiment which suggested the shortening of rods. If light just paces along on its own steam and does not move in a medium called ether, or space, through which the earth was supposed to plough its way, why then it just travels the two distances without pity on the frayed nerves of "metaphysical physicists." Whether purely operational and kinematic scientists are an improvement is another question. Why swing from bad metaphysics to smug "observationalism?" and an observationalism which keeps a flash in a neutral something called "space," the ghost of ether.

Now, of course, in all this I write with due trepidation. A philosopher may protest to science but he yet knows his place in our culture. And the odds are against him in such technical matters. Still, another query can do no harm. Needless to say that I have had an eye on Russell's eventism which shelters itself, in part, under relativity. But what are events? Are they not changes connected with local activity? Any substantialism I would defend includes process, activity, and disposition. It is connected with intrinsic endurance (conservation) and integrative organization. But into this long story I can not here enter.

## IV

It is probable that physicists have accepted relativity because of its useful formulae. In some sense these have been verified in many fields. But may it not be that what has been verified is the fact that light chases particles in movement with respect to the earth, to me asymmetrical, absolute, relational movement having a dynamic basis and prefigured in diagram number 2. Light, I have argued, is a case of absolute process and distance-covering. It can thus serve nicely as a limit for the movement of particles. Einstein's formula thus serves as a kinematic formula for *absolute movement*, not absolute motion with respect to ether or space. It seems like

one of the famous accidents of history that there should be this correspondence. But light and motion were involved. And $t$ was different from $t'$.

Since increase of mass (a relational behavior) can be empirically verified by means of photographs of particles shot out (dynamically) from radium, it has been taken as a verification of Einsteinian kinematics. But may it not be a case of where relative motion is replaced by asymmetrical, absolute movement? And may it not be a physical fact that increase of energy (dynamics) is *exhibited* in movement and measured kinematically in motion? This interpretation seems to me a possibility and emphasizes the heuristic value of Einstein's formulae. But here, again, I speak with due modesty, for I am no expert in physics. Readers will rightly infer that, as against Russell, I am a defender of force and causality and absolute movement. I think trains go to Edinburgh and not Edinburgh to trains. And I think that the earth circles the sun and and not conversely. Here, again, *historical astronomy,* and not kinematics, must say the last word.

Existentially, light is a process and not timeless. Each pulse temporally precedes the successor. It is only timeless kinematically in that it is the limit for the clock's slowing down. This distinction in itself brings out, in my opinion, the difference between the existential situation and the thought-form and conventions of kinematic knowledge about $s$ and $t$ in relative motion. Of course, if gravitation were speedier and could be observed visually and measured, it could replace light. I still would call attention to the difference between the movement of particles and the process-type of extensity-activity characteristic of light. As yet, matter and its behavior are not comparable to radiational activity.

In this note I have sought to defend distinctions which undercut the paradoxes of relativity by making it kinematic and not existential. My queries are in good faith; and I hope relativists will locate my errors. At least, if, as in all probability, they are there. I have not stressed the various paradoxes, but have tried to dig deeper. A flash, as observed, is a sensation. The locus of its cause can be given either a kinematic position or a physical, existential locus in a moving body. Einstein is ambivalent and gives the *one* flash two kinematic loci. He does this by keeping "space" as the ghost of ether. For me, the actual flash has its physical and its corresponding kinematic locus the same. But existence and operational cognition should not be confused to produce queer cosmologies.

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## DETERMINISM AND MORAL RESPONSIBILITY

THE aim of this paper is to contribute to the clarification, effected by recent writers on ethics (such as Moritz Schlick and Charles Stevenson), of the connection between determinism and moral responsibility. It will be assumed that an agent is morally responsible for a given action if and only if the action to be morally and legally evaluated is subject to punishment or reward; in other words, "being morally reprehensible" and "being subject to punishment" will be treated as equivalent concepts. Furthermore, it will be assumed without argument that punishment is prospective rather than retrospective; specifically, following Schlick (cf. *Problems of Ethics,* chapter VII) and Stevenson (cf. *Ethics and Language,* chapter XIV), I shall assume that the essential function of punishment is to deter, not to retaliate.

In a series of articles in this JOURNAL,[1] Mr. Gardner Williams has endeavored to make the point, which is also made in the present article, that determinism is quite compatible with freedom and moral responsibility. Mr. Williams argues, if I understand him, that it is quite compatible to say both that I am free in the sense of being able to act as I *choose,* and that my choice has nevertheless *causes,* which uniquely determine it. If I feel that Mr. Williams' articles have not terminated all further need for clarifying the connection between determinism and moral evaluation, it is because he argues in terms of a notion of "freedom" which is far from being clear. It is a prime requisite of any clear usage of a predicate that the class of entities to which the predicate may be *significantly* (not just correctly) applied be specified. Thus the classical empiricists Hobbes, Hume, and Locke have all pointed out that if freedom is defined as the property of those actions that are caused by an act of will (a choice), it is insignificant to apply the predicate "free" to the will itself. This, however, does not prevent Mr. Williams from talking about "free will":

> The human will always has both causes and effects. When it has the effects it aims at it is free. Its freedom consists in the fact that it has these effects. Its determinism consists in the fact that it is naturally caused in its entirety. Both determinism and free-will are true. [Vol. XXXVIII (1941), p. 701.]

Now, according to scientific usage of "cause" and "effect," these predicates are applicable to *events.* Is Mr. Williams' "will" an event? Suppose it is, so that "will," in his usage, is synonymous with "volition." In that case I fail to understand his defi-

[1] Vol. XXXVIII (1941), pp. 701–712; Vol. XXXIX (1942), pp. 458–468; Vol. XLI (1944), pp. 411–415.

nition of freedom in terms of "aims" of the will: for an event, according to ordinary usage, has no "aims"; an individual has.

In his article, "Wrath, Responsibility, and Progress in a Deterministic System" (Vol. XXXIX, 1942, pp. 458–468), Mr. Williams expands his notion of freedom as follows:

> Freedom means that a conscious being selects, among several alternatives which are within his power, the one which he really prefers, that he wills to do this one and that he does it successfully. [P. 458.]

On this definition, unfortunately, it is difficult to see how a conscious being could ever be unfree. For according to the definition, it seems, a conscious being is unfree in so far as he selects an alternative which he does not "really prefer." But this kind of event seems to me to be logically impossible, since I do not see any difference of meaning between "selecting an alternative" and "really preferring it." Secondly, I can not see any connection between "freedom" in the sense of "acting in accordance with preference" and "freedom" in the sense of acting successfully. If a pianist prefers the playing of Chopin's B-flat minor sonata to the playing of the same composer's B-minor sonata, his performance is presumably a "free" action, no matter whether it is or is not successful.

Lastly I have to criticize one of his attempted definitions of "freedom" which, on account of its simplicity, comes nearest to being clear: "Doing what we want or prefer to do is, I believe, the best definition of freedom" (Vol. XXXVIII, 1941, p. 702). Presumably this is a definition in use of "free," which may be rewritten as follows: "I am free to perform *A*" $=_{\text{def.}}$ "if I prefer to perform *A*, then I can perform *A*." This is equivalent to saying that *A* is a voluntary action, subject to moral evaluation, if its choice is a sufficient condition for its performance. But this definition is inadequate for two reasons: first, a choice (act of will) is never a sufficient, but at best a necessary, condition for the performance of any action. Secondly, according to ordinary usage, it may be true that I both preferred and performed *A*, and still one would not say I was *free* to perform *A*. What is, moreover, required is the truth of the conditional "if I had preferred non-*A*, I could have performed non-*A*." Thus nobody would call a man's fall, when unsupported by solid ground, a free action, even though the man, proud of affording further evidence for the hypothesis of universal gravitation, should be most *willing* to fall.

After these critical remarks I shall proceed to my main theme. To avoid exposure to criticisms similar to those I leveled against Mr. Williams, I shall present my arguments without any reference to the confused notion of "free will."

That actions that are *in*voluntary, in the sense of being performed under external *compulsion,* are exempt from moral condemnation, has been noted by Aristotle already (cf. *Nicomachean Ethics,* Book III). But while Aristotle clearly distinguished between indeterminacy and freedom or voluntariness, using "freedom" as the opposite of "compulsion," subsequent writers on ethics have created a pseudo-problem by confusing "freedom" with "indeterminacy," "compulsion" with "determinism." As Schlick has emphasized, the influential belief that the theory of universal determinism is incompatible with the practice of holding agents morally responsible for actions of a certain kind has arisen mainly through an exploitation of the ambiguity of the word "law." That human conduct is subject to laws may mean (*a*) that human conduct is subject to *pre*scriptions of how men *ought* to act in determinate situations, or (*b*) that there are laws *of* human conduct which *de*scribe how human beings as a rule behave in determinate situations.

Now, obviously, propositions (*a*) and (*b*) are mutually compatible, and one wonders how people could ever fall into the error of believing them to be incompatible. As Schlick suggests, the belief that, if human conduct is subject to invariable laws it can not plausibly be either condemned or extoled, may have arisen through a surreptitious substitution of the *normative* meaning of "law" for its *descriptive* meaning, the meaning it has in the phrase "law of nature." If, as Kant said, "ought implies can," and the laws of human conduct *compel* human beings to act the way they act, how is it justifiable ever to tell a man "you ought not have acted the way you acted"; is this moral condemnation not just as futile as it would be to blame the planets for moving in elliptic orbits instead of in perfect circular paths? Putting this delusive argument for the incompatibility of universal determinism and ethics into syllogistic form: nobody is responsible for a compulsory action; but all actions, being subject to *laws,* are compulsory; hence nobody is responsible for any action.

This argument, involving an easily detectable fallacy of equivocation, shows how influential the unfortunate ambiguity of the word "law" may have been in fostering the opinion that ethics presupposes indeterminism of human actions that spring from deliberation. Another source of serious errors is lack of clarity as to the meaning of "determinism." Determinism is often defined as the theory that whatever happens, happens in accordance with *laws.* Now, if "determinism" is *methodologically* ("methodological" being contrasted with "ontological") defined in terms of predictability of events, our attention is called to two types of

determining factors: laws and initial conditions. To assert that determinism holds with respect to a class of events is to assert that this class of events is subject to (descriptive) laws such that from a description of some members of this class in terms of selected properties it is possible to deduce a description of other members of the same class, differing in their temporal coördinate. The values of the properties (in the physicist's language: the values of the "state variables") from which the deduction *in terms of* laws proceeds, are commonly called "initial conditions," and the totality of the initial conditions at a given time of the system whose behavior is to be predicted is called an "instantaneous state" of the system. In Newtonian mechanics, for example, the properties in terms of which a state of a system such as the solar system is described are relative positions and momenta of particles. From this definition of determinism it is, incidentally, evident that the knowledge of the laws to which the behavior of a kind of system is subject does not warrant an affirmation of the deterministic character of the system. A knowledge of laws is a necessary but not a sufficient condition for predictability. If an exhaustive knowledge of initial conditions is (theoretically or practically) impossible, the laws are, so to speak, without a point of application, and the behavior of the system is neither predictable nor controllable.

Our definition of methodological determinism implies that the behavior of a deterministic system is, indeed, invariable in the sense of according with laws, but is nevertheless *controllable* provided it is possible to control its *initial conditions.* It is my objective to show that determinism of human conduct is quite compatible with the practice of moral evaluation, since the latter presupposes, not the changeability of the laws of human conduct, but merely the controllability of the initial conditions of human conduct.

Those who think events subject to moral evaluation can not be causally determined, may advance delusive arguments of the following sort: If there is any point in postulating that $x$ *ought* to act in such and such a way it must be possible for $x$ to act that way as well as not to act that way. But if $x$ acts in accordance with a law of conduct, then, even though the law may not be felt by $x$ as a *compelling* agency, it is empirically impossible for $x$ to act contrariwise.

Now, it is no doubt logically impossible that an act of moral evaluation, whether in the abstract form of a mere moral judgment or in the more concrete form of punishment or reward, should ever influence an agent to contradict, by his future actions, a descrip-

tive law of conduct: a commandment may be broken, but a descriptive law which is broken in a given instance is not a genuine law, by the very meaning which the word "law" has in science: a law claims universal validity.[2] However, in order for moral judgments to have a causal influence upon human conduct, it is not necessary that the laws of human conduct be changeable; it is sufficient that the initial conditions of human conduct be changed in such a way that a law whose consequent expresses an undesirable effect be rendered *inapplicable*. To illustrate by a trivial analogy: suppose you dislike to see sugar dissolve in a certain liquid. Obviously, there is nothing you can do against the *law* that sugar is soluble in that liquid. But what you may do is to keep sugar from being immersed in that liquid. That is, you may prevent the realization of the conditions that have to be realized if the law is to have any *application*. Sugar will continue to behave *in accordance with* the law expressed by the predication of that dispositional property, but you have prevented its exhibiting an *undesirable* effect. What is inessential in this trivial analogy is the specific *way* in which a law stating the conditions of an undesirable effect is rendered inapplicable: we have considered the case where initial conditions are *eliminated*. Of course, a law may alternatively be deprived of applicability by the *addition* of initial conditions. Thus, suppose our solar system did not have a *constant* number of planets, but that new planets progressively came into existence. For aught we know, the attractive forces exerted by these new planets might obey the same formula as the gravitational forces acting upon the old planets. But even though the planetary motions would still *accord with* the law of gravitation, their orbits would not be elliptical and, on account of the progressively increasing complexity of initial conditions, the behavior of the solar system would be altogether unpredictable. And if an omnipotent God wanted, for his own amusement, to bring about a deviation from a traditional orbit, he should not have to change the laws of motion; he might simply create a new planet, and assign to it a suitable position in the solar system.

Provided it is possible to control the initial conditions of a process, the effects of the process may be controlled, even though no interference with the laws of the process is possible. Thus the

[2] It is sometimes said that a *statistical* law, in contradistinction to a dynamic law, admits of exceptions or contradictory instances. But this is a mere verbal confusion. A statistical law asserts that, if such conditions are realized, such effect will occur with a determinate probability. Obviously, if the effect, in a given case, *fails* to occur, the statement that its occurrence has, in terms of specified conditions, such and such a probability, is not refuted.

supposition that there are immutable laws of human conduct—that there is such a thing, in other words, as a "human nature"—is quite compatible with the possibility of controlling human conduct by influencing men through moral judgments. In contradistinction to natural processes, in which purpose can not, without speculative analogical inference, be assumed to have any causal influence, part of the initial conditions of human actions are purposes, or *motives*. Now, if moral judgments, whether laudatory or prohibitive, essentially function as *instruments of motivation*, it follows that human conduct may be controlled by controlling the *state* of a moral agent, even though moral judgments can not affect the laws of conduct which define the *nature* of a conscious agent and describe the way in which the agent behaves. For example, in a state of drunkenness a man tends to behave in socially dangerous ways. A criminal code set up in the interest of social security obviously can not break the law that *if* a man is drunk, he tends to act in socially dangerous ways. But all it needs to achieve is to convert that law from an inductive generalization into a *contrary-to-fact* conditional: the anticipation of punishment may constitute a motive whose force exceeds the force of the impelling motive constituted by the anticipation of the pleasure which accompanies a state of drunkenness, and thus the criminal code exercises a deterring function. If moral law can influence human conduct, whereas it is powerless with respect to natural processes, the reason is not that there are no laws of human conduct in terms of which human actions may be predicted; the reason lies in the difference in the type of initial conditions: the initial conditions of human conduct are, in part at least, motives, and may hence be modified by motivation.

It is quite true that it is impossible to change the nature of an individual; but since this is a trivial *analytic* statement, any fatalistic conclusion drawn from it must be a *non-sequitur*. It is an analytic statement, since by the "nature" of an individual we understand—provided this emotively tinged term has any clearly definable descriptive meaning at all—a set of dispositional properties, i.e., ways of reacting, in terms of which the individual is behaviorally identified;[3] if the individual changed his nature he would be a different individual. But it is a mistake to suppose that if the dispositions, whether inherited or acquired, of an individual can not be changed, his behavior is pre-determined and beyond control. For dispositional causes are necessary, but not sufficient conditions of behavior; in order for them to be displayed, appro-

[3] I distinguish a behavioral identification from a merely external identification in terms of a proper name.

priate stimuli must be present. It is these stimuli over which moral and legal norms have control, however successful genetic sciences may be in explaining the origin of dispositions. If the justifiability of norms implied that it is possible to change *ways* of reacting, then, indeed, one could not without contradiction believe that there are psychological laws of human conduct *and* that human conduct may be controlled by norms. Since the normative regulation of human conduct is obviously a fact, something must be wrong with the supposed implication of the justifiability of norms. Indeed, the error lies in supposing that if *ways* of reacting (dispositions, habits) can not be changed, reactions can not be changed. But, obviously, human reactions may be changed through control over stimuli. Commandments and prohibitions can not change dispositions, but they may *counteract or promote their display.*

The opinion that ethics, in the sense of a *practice* of morally evaluating human conduct, entails some sort of indeterminism with respect to human actions, is often supported by the following argument: a man is morally responsible for a given action if and only if he could have acted differently; that is, if the situation *compelled* me to act the way I did, I can not be held responsible for my action. But the very definition of "determinism" implies that, given certain initial conditions, one and only one course of events could have ensued. Hence, if determinism is true, it is only our ignorance of the causes and laws of human behavior that makes us ever entertain the erroneous belief that what was done might have been left undone. To be sure, you may distinguish between actions that are uniquely determined by physical circumstances alone (involuntary actions like sneezing) and actions into which *choice* enters as a determining factor. But if the principle of causality is to apply to mental as well as to physical events, you must assume that choices themselves are uniquely determined events. Hence, even if it is true that some actions are "voluntary" in the sense that they would have been left undone *if* the agent had chosen to act differently, we could never, consistently with the principle of causality, assert that the agent could, in the given circumstances, have chosen differently. Hence, if moral condemnation is to be justifiable, we must assume that the correspondence between the initial conditions and the actual direction of morally accountable behavior is not one-one, as determinism postulates, but one-many: that is, morally accountable behavior is not uniquely determined by its conditions.

This is a position actually taken by C. D. Broad, in a lecture entitled "Determinism, Indeterminism and Libertarianism." Determinism, according to Broad, is compatible only with "condi-

tional obligability," not with "categorical obligability" of actions. An action is conditionally obligable if the agent *could* have acted differently *if* he had made a different choice. But conditional obligability is only a necessary, not a sufficient, condition of moral responsibility. In order for moral reprobation to be fully justifiable, the action that is disapproved of must moreover be *categorically* obligable. Now, categorical obligability entails indeterminism, in the following sense: an action is categorically obligable if and only if the series of its causal ancestors contains a member which is not itself completely determined. Suppose, to illustrate, that such a partially indeterminate causal ancestor is a volition. Then, by saying that the volition is partially indeterminate is meant that the premises expressing the causal conditions of the occurrence of the volition do not entail a prediction of a *unique* value of the intensity or direction of the volition; in other words, the causal premises are compatible with *alternative* statements concerning the values of the properties (dimensions) in terms of which the volition is described. Indeterminism of voluntary actions, entailed by categorical obligability, thus means that the series of causal ancestors of a voluntary action contains a state of the agent which is not uniquely determined by the preceding states.

Now, if it is true that reprobation or punishment (to restrict ourselves to the negative mode of moral evaluation) is justifiable only on the assumption that the agent could, in the given circumstances, have acted differently, then universal determinism (i.e., determinism with respect to both physical and mental events) makes, indeed, all reprobation and punishment unjustifiable. But if the justification of punishment lies in its function as deterrent, the picture radically changes. That human conduct is uniquely determined, if not by physical conditions alone, at least by physical and mental conditions conjointly, can not be controverted, simply because it is not a refutable empirical statement but a *leading principle* of genetic research: as long as the correlation between the conditions and the actual course of behavior appears to be one-many, the genetic psychologist will simply conclude that he has not yet acquired an exhaustive knowledge of all the relevant conditions. In the sphere of moral behavior just as much as in the sphere of physical behavior a different effect is evidence for a different set of conditions, hence there is no sense in affirming that in the *same* situation an agent might have acted *differently* from the way he acted. But what moral evaluation intends to achieve—and it is justified to the extent that its fundamental purpose is realized—is to prevent or promote the *recurrence* of the situation accompanied by a morally undesirable or desirable effect. Moral

evaluation, in supplying deliberating agents with *motives* of conduct, introduces, as it were, new forces into the psychological field which modify the effects which the forces already at work would otherwise have.

Why, then, do we refrain from evaluating morally actions to which conscious choice has no causal relevance? For the same reason that men emancipated from a primitive animistic conception of nature do not try to influence the course of physical events by prayers or threats. If the chief function of moral evaluation is the creation of motives that might modify the decisions of a moral agent, it is obvious that moral evaluation will *make no difference* to actions to which choice itself makes no difference, i.e., actions which will be performed no matter whether the agent chooses to or not. Moral judgments can influence human conduct but indirectly, by influencing people's *choices*. Hence, if choice has no influence upon a certain kind of action, moral evaluation of an action of that kind is bound to be pointless.

I have tried to argue that the practice of moral evaluation is quite compatible with a belief in universal determinism, and that it is therefore unnecessary to justify the practice of moral evaluation, in Kant's manner, by postulating an "intelligible world" in which the principle of causality does not hold; for "freedom" is the opposite of "constraint," and "causality" can be defined without any reference to the animistic notion of constraint. However, if a metaphysician, persuaded by the foregoing arguments, should be ready to abandon the Kantian dualism between a deterministic physical world and an indeterministic moral world, he might still hold that moral evaluation can be justified only by the metaphysical assumption of a causal influence of *mental* events, viz., volitions or choices, upon physical events, viz., manifest behavior. He might grant that moral evaluation does not presuppose the existence of uncaused choices, but insist that only actions caused by a peculiar kind of *mental* event[4] are subject to moral evaluation. Such a view seems to involve a psycho-physical interactionism which is alien to a strictly behavioristic approach to human conduct.

[4] Some metaphysical moralists would go so far as to say that only actions caused by the *self* have moral attributes. This view can hardly stand serious analysis, since it involves a misuse of the term "cause": the cause of a spatio-temporally definite event is always likewise a spatio-temporally definite event; if there are no events in your premises there can not be any events in your conclusion. But the self is supposedly a *continuant*, to use Broad's term, something which may without contradiction be said to exist identically at different times and places; hence it can not be said to *cause* any events.

But in this respect again, the practice of moral evaluation may be justified in terms of its *function,* in complete independence of any metaphysical theories. For suppose that, as a "materialistic" behaviorist, one substitutes "brain event" for "mental event" and defines voluntary actions subject to moral evaluation as actions caused, not by an "act of will" that defies physical description, but by a peculiar kind of physiological event. Presumably one would then credit the choice or volition which is co-occurrent with the brain event with merely epiphenomenal, i.e., acausal existence. How could such a "reduction" of the experience of efficacious volition to a physiological kind of event in any way affect the division of actions into amoral and moral ones? It would still remain the case that some actions are caused by brain events whose introspectable correlates are deliberate choices, while other brain events, causally correlated with *in*voluntary actions, do not have such correlates. The behaviorist, if infected with a materialistic metaphysic, easily falls into the "reductive fallacy" by misinterpreting the copula in laws which express psycho-physical correlations, to assert *identity.* But if behavioristic definitions of terms denoting feelings or sensations in terms of physiological expressions have any counterpart in experience, it is because laws of psycho-physical correlation are taken for granted in the first place; and "correlation," as of a pain and a neural event, implies distinctness of the correlated kinds of events.

Thus, whether you are a psycho-physical interactionist or prefer to substitute, in any causal explanation of physical events, physiological events for their mental or introspectable correlates, is irrelevant to the problem of the justifiability of moral evaluation.

Whenever a "correct analysis" of a concept is proposed, it is by no means easy to find *criteria* for the correctness of the analysis. "Common usage" of the concept to be analyzed is seldom sufficiently unambiguous to admit of a *unique* correct analysis. Thus the pragmatic conception of moral responsibility, taken for granted throughout this analysis, as a property of *controllable* actions, can not claim to have no alternatives. However, one may safely postulate that any correct analysis of the concept of moral responsibility must be such that the application of this concept does not interfere with applications, made in genetic sciences, of the concept of causality. That the pragmatic conception of moral responsibility avoids a conflict between the leading principle of determinism or causality and the practice of moral evaluation is indicative of its adequacy.

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## BOOK NOTES

*Preface to an American Philosophy of Art.* A. PHILIP MCMAHON. Chicago: University of Chicago Press. 1945. vi + 194 pp. $2.50.

Reviewers in this JOURNAL are seldom called upon to appraise a book whose merit, according to its author, is not that it is truer or more adequate than others of its type, but, rather, that it is more *American.* This, however, *is* Mr. McMahon's claim. In his own words, "The reader will find here an argument as to why the prevailing attitude of philosophical idealism with regard to art is inacceptable; but the conclusion of the discussion is not simply negative, for immediately afterward contributions toward a superior alternative are offered" (p. 1). By "superior" one might suppose that Mr. McMahon merely means "more adequate" or "more probable." He makes it quite clear, however, that this is *not* what he means. "This alternative," he says, "is held to be superior because it does not demand subservience to an alien mode of thought and because it makes art worthy of the devotion of those who prefer a theory of art in accord with our normal habits of thinking and acting" (*ibid.*).

Mr. McMahon's main purpose, then, is to free American art theory from the incubus of the "German" idealistic view that the function of art is to embody the quality of beauty, and that art and esthetics are therefore the same.[1] Such a view, he feels, leads to an irresponsible philosophy of art which "promote[s] a way of thinking hostile to our best interests" (p. 4). In its place he offers a "realistic" theory, better suited to "the structure of the American mind." Why this is so, however, we are not told.

The greater portion of the book is concerned with an analysis of certain historical factors which, blended together, form the "German view." Simply as a chapter in the history of ideas this portion is of considerable interest. Mr. McMahon begins by tracing in some detail the transformation of the concept of "art" from the Greek notion of "technique" or "design" to the German idea of "*Kunst,*" and the change in the status of the Platonic Ideas to that of psychological ideas or concepts which mean only what they are intended to mean. The notion of "*beaux-arts*" is also traced back to its seventeenth-century origins where it was used by a certain Abbé Dubos as a means of opposing a principle of

[1] Mr. McMahon is apparently unaware that Ducasse, Prall, Santayana, Dewey, Edman, and others have all insisted in one way or another upon a distinction between art and esthetics.

propriety or decorum to the then prevailing view that art is an imitation of nature.

By showing how these new accretions of meaning were indiscriminately grafted onto the old ones Mr. McMahon reveals the confusions implicit in so many of the "problems" with which succeeding theorists were preoccupied. The first of these was to reconcile a classification of arts originally based upon technique and imitation with one which appealed solely to the criterion of "fineness" or "beauty." Having assumed the latter mode of classification as primary, eighteenth-century writers proceeded to lump together indiscriminately the arts of design—painting, sculpture, and architecture—with music and literature under the all-embracing rubric of "fine art." From this it was hardly a step to the conclusion that the "excellence" of any "true" work of art, no matter what its origins or purpose, is determined solely by the degree to which it is invested with beauty.

Under the influence of rationalism, however, art was also regarded as a mode of "confused knowledge." By this was meant, of course, sensory experience. Thus, when Baumgarten came to formulate the concept of "esthetics," he defined it as both the science of "sensuous knowledge" and the science of "beauty" which, in turn, were considered identical. Art is beauty, but art is also sensuous knowledge; *ergo* sensuous knowledge is beauty. Ever since, esthetics has remained a bastard science, founded upon a logical error, presumptuously taking all art as its province, and uneasily passing back and forth without pause between the idea of sensuous apprehension and the idea of beauty. The result, clearly, could only be an egregious misunderstanding of all three: art, beauty, and the sensuous.

Yet in the background there remained the old classical view that art is an imitation of nature. Thus there arose the interminable discussions of the problem of how the representative, expressive, and "spiritual" values of art could be understood wholly in terms of sensuous knowledge and/or "beauty." These discussions, needless to say, have continued unabated down to the present time. In fact, they form the stock in trade of many estheticians.

Error becomes evil, however, only in the hands of the German romantic idealists who translated the idea of beauty *cum* art into a megalomaniac philosophy of art, value, life, and reality rolled into one. By them "The implications of the belief condensed into the formula *beaux-arts* were fully accepted; a conviction that art is always beautiful and beauty is always to be found in art gave the romantic idealists what seemed to them an undeniable example of the creative will" (p. 87).

It was Schelling who ultimately identified art and beauty as "a necessary and immediate image of the absolute" (quoted by Mr. McMahon, p. 89). For him art becomes the ultimate spiritual discipline, a necessary gateway, in its higher and more romantic forms, to the vision of the absolute. For Schelling, the artist is the Genius, the lay priest of Spirit to which alone he is responsible. As such he is free from any obligation to "foreign authority," and acknowledges only himself as Law.

It is obvious that such a conception of the rôle of the artist lends itself perfectly to the manic intuitions of "the absolute artist of romantic idealism," Adolf Hitler. Mr. McMahon does not claim that Hitler was directly influenced by any of the "professional philosophers, such as Hegel or Nietzsche, who came after Fichte and Schelling" (p. 93). Nevertheless his views on art "implied acceptance of romantic idealism if they were to be rationalized at all" (*ibid.*).

Although Mr. McMahon's exposition is highly selective and often appears in the guise of a philosophical witch-hunt, much of what he says about the romantic idealist philosophy of art and its historical denouement, to the present writer at least, seems incontestable. But the author's own "preface" to a "realistic" and "American" philosophy of art is much less satisfactory. Even the meaning of "realism" is not made clear. We are told little more than "a realistic philosophy of art warrants a search for beauty in art, and when we find it we do not deceive ourselves. We deal with realities rather than with illusions" (p. 179).

Works of art are defined as presenting "patterns of sensory data . . . [which] are significant and valuable as a result of human, ordered actions" (p. 150). Their essence is not beauty, although they may be judged "aesthetically." A work of art is so judged when it is regarded as "intelligible as an orderly product and valuable as a result of human enterprise" (*ibid.*).

Such a limitation of art to "patterns of sensory data" is questionable in itself. It also seems curiously under the spell of the very theories which Mr. McMahon excoriates. He builds on firmer foundations, although there is nothing new in the view, when he asserts that there is no reason why the "form" of a work of art should exclude its non-tactual or non-visual components. To relegate the relational and affective components of art to the limbo of mere "content" is to ignore the fact that they *possess* form as well as *give* form to the qualities themselves. As Dewey has shown, they are taken together with the qualities *to form an* experience.

There are, then, some interesting, if oversimplified and distorted, historical analyses of the concepts of "art" and "aesthetics" in

this book. There are also parts of the author's own theory which are sound enough so far as they go, although quite unoriginal and commonplace. But the positive merits of the book have little chance in so chauvinistic a context.

H. D. A.

*The Philosophy of Edward Bellamy.* ARTHUR E. MORGAN. New York: King's Crown Press. 1945. vii + 96 pp. $1.60.

Dr. Morgan, in a series of essays and a reprint of Bellamy's *Religion of Solidarity*, attempts to present Edward Bellamy as an original, if fragmentary, philosopher. This book is intended as a supplement to Morgan's recent biography of Bellamy, in which many passages bearing on Bellamy's social philosophy were cited. Here we are given Bellamy's thought on more general themes.

Morgan claims for Bellamy "one of those rare original minds which have the skill and power to get outside the framework of our thinking and to view man and his setting as would a fresh mind from another sphere" (p. v). Bellamy described thus the fresh view he tried to gain: "We should seek to reverse the accustomed order and make the objective subjective and the subjective objective. That is, we should seek to view ourselves as from without instead of viewing all things as from ourselves as from within. Seek a home, a center, a more intimate ego in the universe of things without" (p. v, quoted from one of Bellamy's unpublished papers). Now this is a sort of inverted Emersonianism, equally transcendental. In place of the attempt to draw all things into the soul, giving meaning to all in terms of the indwelling spirit there, Bellamy attempts to place the individual soul as indwelling in the universal soul. If this transcendental method is to be illustrated by this book, it must be by the only included material of any length by Bellamy himself.

The inversion being granted, the product is decidedly similar. Bellamy's *Religion of Solidarity* is a more or less connected statement of the relation between man and the divine. Written in 1874, when the author was only twenty-four, it remained for him his "ripe judgment of life." It begins (as did Emerson's "Divinity School Address" of 1838) with a passage of warm appreciation of the beauty of nature. This is followed by the suggestion that human nature is a part of nature:

> Thus continually does the spirit in man betray affinity with nature by vague and seemingly purposeless longings to attain a more perfect sympathy with it. So far as this universal and strongly marked instinct can be distinctly interpreted, it indicates in human nature some element common with external nature, toward which it is attracted, as with the attraction of a part toward a

whole, and with a violence that oftentimes renders us painfully conscious of the rigorous confines of our individual organisms. [P. 7.]

The soul, then, becoming aware of limitation, attempts to transcend the individual. Man becomes "conscious of a painful incongruity between the soul, so easily contemporary with all time, and his individuality weighted down to a little point of time" (p. 8). In transcending the individual and the life of the individual to which it is bound in space and in time, the soul is "a spark of the universal life, . . . greedy of infinity, asserting solidarity with all things and all existence" (p. 9).

The soul's transition from personality to impersonality, from the finite to the infinite, from the conditioned to the unconditioned, is illustrated in esthetic experience; men forget themselves in the realization of beauty and thus "obtain a hint of the mode of . . . impersonal consciousness" (p. 9). Any such emotion or mood which carries men beyond their personalities is a revelation of "the activity of the greater self" (p. 10). Finally, introspection itself can reveal the impersonal "in the penetralia of the soul" (p. 10).

There are moments of divided consciousness when the impersonal soul seems to stand aside from the activity of the individual, to view the individual serenely and critically as from another plane. "It is at such times as that we become, not by force of argument, but by spontaneous experience, strictly subjective to ourselves, that is, the individuality becomes objective to the universal soul, that eternal subjective" (p. 11). Man's realization of his universal psychical nature seemed to Bellamy to be coming to gradual fruition, the sense of "solidarity with the universe" to have been a late development in the human soul. Thus the romantic sense of nature is a development of the nineteenth century, and "if culture can add such a province as this to human nature within a century, it is surely not visionary to count on a still more complete future development of the same group of subtle psychical faculties" (p. 12).

Despite the beauty of solidarity, individuality must not be despised. "The personality . . . is dignified in being the channel, the expression of the universal." Solidarity is the centripetal force, individuality the centrifugal; solidarity tends toward unity, individuality preserves "variety in unity" (p. 13). "Individualities may or may not match well—here is room for choice; but souls always match, for they are inhalations of one breath, tongues of one flame" (p. 18).

The intent of this religion of solidarity is to provide "the only rational philosophy of the moral instincts" (p. 19). Unselfishness

may be the essence of morality but, if the individual is the ultimate unit, it is madness. On Bellamy's theory, however, unselfishness is the sacrifice of the lesser self, the individuality, to the greater self, the solidarity. Also in terms of this duality, it becomes unnecessary to maintain the traditional position that this life is but the preliminary to a better life to come. "Time is not the vestibule of eternity, but a part of it. We are now living our immortal lives. The present life is its own perfect consummation" (p. 21).

Thus did Bellamy resolve the distinction between time and timeless; his kinship to transcendentalist thinking becomes more evident when his solution is considered beside that of Herman Melville, one of the more radical transcendentalists, who also recognized that there were concurrently operative in our lives two types of time, namely, timed and timeless, which Melville called "horological" and "chronometrical," respectively. Melville, too, sought to reconcile the two, in his *Pierre,* and succeeded in providing a puzzle for critics. Bellamy also creates two new terms for his discussion: "telescopic" and "microscopic." The telescopic is a window opening on the infinite, the timeless, the chronometrical; the microscopic opens on the infinitesimal, the individual, the horological. Bellamy, like Melville, saw that neither telescopic man nor microscopic man is the ideal man, but that practical life calls for a mixture. "More and more be it the end of our philosophy to make the larger life the true and central, the individual inferior and accidental" (Bellamy, p. 21). "Let men be taught those chronometricals and Horologicals, and while still retaining every common sense incentive to whatever of virtue be practicable and desirable, and having these incentives strengthened, too, by the consciousness of powers to attain their mark; then there would be an end to that fatal despair of becoming at all good" (Melville, *Pierre,* pp. 299–300).

There is a striking analogy between Bellamy's thought and another type of American Platonism, which emerges in his discussion of love. Here Bellamy might well be a nineteenth-century Jonathan Edwards, declaring a doctrine of "love for Being in general" in language differing not too much from Edwards' own. "Love between individuals is the attraction between kindred particles, but the greatest of all loves . . . the most insatiable love of loves is that of an individual for his remnant, the universe. This is the love of god by whatever name men may choose to call it" (p. 17). Perhaps more of Edward Bellamy's thought than Morgan suspects is the result of the working out of the Edwardean doctrines which came into the family through his ancestor, Joseph

Bellamy, Edwards' disciple. An interpretation of Edward Bellamy's thought from this point of view might be fruitful.

Unfortunately, the remainder of the material which Dr. Morgan has collected in the brief essays which complete the contents of this little book has neither the interest nor the consistency of the "religion of solidarity." However, those who are interested in the genetic study of the social ideas expressed in *Looking Backward* and in *Equality* will find hints in Bellamy's views as expounded in Dr. Morgan's chapters entitled "Edward Bellamy and Nemesis" and "The Economy of Happiness."

JOSEPH L. BLAU

NEW YORK CITY

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## OTHER NEW BOOKS AND JOURNALS

De Havas, F.: The Equilibrium Theory of the Human Consciousness. Lecture delivered to the Scottish Section of the British Psychological Society at the University of Glasgow on the 1st December, 1945. Enlarged and revised. Glasgow: M. Douglass Macrae. 15 pp. 2s, 8d.

Runes, Dagobert D., editor: Bible for the Liberal. New York: Philosophical Library. 1946. xii + 368 pp. $3.50.

Ghyka, Matila: The Geometry of Art and Life. New York: Sheed and Ward. 1946. xvii + 174 pp. $4.00.

THE PHILOSOPHICAL REVIEW. Volume LV, Number 2. Democratic Equality and Individuality: *Grace A. de Laguna.* The Quest for Certainty: *Paul Weiss.* The Language of Shapes and Sizes in Architecture or on Morphic Semantics: *Max Rieser.* Discussion—The Event in Res as Ontological Unit: *L. O. Kattsoff.* Art and Science Inseparable: *Van Meter Ames.*

THE MODERN SCHOOLMAN. Volume XXIII, No. 3. The Philosophical Study of Sensation: *Y. R. Simon* and *J. L. Peghaire.* Abstraction from Matter in Human Cognition according to St. Thomas: *M. R. Holloway.* Democracy—Stalin and St. Thomas: *Wilfrid Parsons.* The Problem of Action in the Commentary of St. Thomas Aquinas on the Physics of Aristotle: *M. T. Miller.*

REVUE PHILOSOPHIQUE DE LOUVAIN. Tome 44, No. 1. La critériologie de Mgr. Mercier: *Georges Van Riet.* Hegel et l'universelle contradiction: *Franz Grégoire.* La technique de la logique combinatoire: *Robert Feys.*

We have received the following reprints:

"Philosophy of Art in the Soviet Union" by John Somerville in *The American Slavic and East European Review,* Vol. IV (1945), Nos. 10–11.

"The Genteel Tradition in Liberal Education" by Harold A. Taylor, in *The Antioch Review, Winter,* 1945–1946 issue, pp. 552–563.

"Objective Tests in Philosophy" by Harry Ruja, in *Journal of Higher Education,* Vol. XVII (1946), pp. 152–154.

"Social and Political Thought in Latin America" by Harold E. Davis, in *Twentieth Century Political Thought,* edited by J. S. Roucek, pp. 488–514.

"Conflict of Philosophies in Contemporary Law" by Iredell Jenkins, in *Tulane Law Review,* Vol. XX (1946), pp. 333–362.

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## NOTES AND NEWS

Theodore M. Greene, McCosh Professor of Philosophy at Princeton University, who has spent the past year at Stanford University, has accepted an appointment as Professor of Philosophy at Yale University.

Monroe C. Beardsley, Assistant Professor of Philosophy at Mount Holyoke College, has been appointed Assistant Professor of Philosophy at Yale University.

Iredell Jenkins, Associate Professor of Philosophy at Tulane University, has been appointed Assistant Professor of Philosophy at Yale University.

Rulon S. Wells III, Ph.D., Harvard, 1942, has been appointed Instructor in Philosophy at Yale University.

Charles W. Hendel was appointed Director of Graduate Studies, and Brand Blanshard, Chairman of the Department of Philosophy, at Yale University, as of March 1, 1946.

Henry D. Aiken, Assistant Professor of Philosophy at the University of Washington, has been appointed Associate Professor of Philosophy at Harvard University.

Abraham I. Melden, formerly instructor at the University of California, and Arthur F. Smullyan, instructor in mathematics at Williams College, have been appointed Assistant Professors of Philosophy at the University of Washington.

Max H. Fisch, formerly Assistant Professor of Philosophy in Western Reserve University and more recently Chief of the History of Medicine Division of the Army Medical Library, has been appointed Professor of Philosophy at the University of Illinois.

Professor T. V. Smith of the University of Chicago has sent us the following communication: "If you want to help re-orient me, you might advertize my return to my old stand after my being (1) Director of Education in Italy, (2) Planner in London of re-education in Germany, (3) Trainer of military governors for Japan, (4) Democratizer of German prisoners of War—see *Saturday Review of Literature,* May 4, 1946, (5) Recommender of education reform of Japan for MacArthur. I have just given the foundation lectures of Scripps-Pomona-Claremont Colleges, which they will publish as *Atomic Power and Moral Faith.*"

For use in a study of the life and work of the philosopher-biologist Edmund Montgomery (1835–1911), information is requested concerning the location of extant unpublished letters from Montgomery to other biologists and philosophers, particularly to the following of his known or probable correspondents: Francis E. Abbot, Karl Theodor Bayrhoffer (Marburg School immigrant to Wisconsin), John C. Bundy (*Religio-Philosophical Journal*), Paul Carus (*The Open Court; The Monist*), Thomas Davidson, the Free Religious Association, W. T. Harris (*Journal of Speculative Philosophy*), Shadworth H. Hodgson (Aristotelian Society of London), W. M. Salter, B. F. and Sara A. Underwood (Boston *Index; The Open Court*), George Croom Robertson (*Mind*), James H. West (*The New Ideal*). Information on the location of such literary remains is sought by I. K. Stephens and Morris T. Keeton (9 Oxford Street, Cambridge 38, Massachusetts).